

BOREHOLE LOG

Project Name: VANDENBERG AFB IRP: OU 2, Site 20, Landfill 1/Drum Disposal Site 1

Project Number: 01K78601

Borehole No.: 20-MW-11

Sheet 1 of 3

Borehole Location: 2099096.86 N, 5801824.08 E

Elevation and Datum: 458.30 feet MSL

Drilling Contractor: Tri-County Drilling, Inc.

Date Started: 05/14/98

Date Ended: 05/14/98

Drilling Equipment: CME-75

Total Depth: 90 feet

Groundwater Depth: 86 feet

Drilling Method: Hollow Stem Auger

Sampling Method: Split Spoon

Borehole Diameter: 11 inches

Driller: M. Ferguson

Borehole Abandonment: Completed as 4" monitoring well

Hammer Information:
Manual Hammer: 140-lb and 30-inch drop

Logged By:
D. Peeler

Checked By:
M. Anderson

| Depth (feet) | Lithologic Description | Symbol | USCS | Sample | Sample Number | Blow Counts | Field OVA (ppm) | Remarks |
|--------------|---|--------|----------|--------|---------------|-------------|-----------------|---|
| 5 | SILTY SAND, very dark grayish brown (2.5YR 3/2), moist, fine to medium grained, loose. Same as above, wet. | | SM SM | | | | 0 | Hand augered to 7 feet. Perched water 2 to 5 feet. |
| | SILTY CLAY, olive brown (2.5Y 4/3), dry, soft, loose. | | CL | | | | 0 | |
| | CLAY, light gray (2.5Y 7/2), dry, hard, nonplastic. | | CL | | | | | |
| 10 | CLAYEY SAND, grayish brown (2.5Y 5/2), dry, hard, very dense, low plasticity. | | SC | | | | 0 | |
| | SANDY CLAY, grayish brown (2.5Y 5/2), moist, firm, medium plasticity, with fine to medium grained sand (20%). | | CL | | | | | |
| 15 | CLAY, light olive brown (2.5Y 5/3), slightly moist, firm, stiff, high plasticity, with sand (10%). | | CL | | | | 0 | |
| | Same as above, soft, with trace sand. | | CL | | | | | |
| 20 | Same as above, olive brown (2.5Y 4/3). | | CL | | | | 0 | Easier drilling. |
| | Same as above, firm, stiff. | | CL | | | | | |
| 25 | Same as above, with trace angular chert gravel. | | CL | | | | 0 | |
| 30 | | | | | | | | |

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| Depth (feet) | Lithologic Description | Symbol | USCS | Sample | Sample Number | Blow Counts | Field OVA (ppm) | Remarks |
|--------------|---|--------|------|--------|---------------|-------------|-----------------|---|
| | Same as above, with trace angular chert and subangular shale gravel up to 3/4". | | CL | | | | 0 | |
| 35 | SANDY CLAY, olive gray (5Y 5/2), slightly moist, stiff, firm, high plasticity, with fine sand-size rock fragments (25%) and trace rounded gravel. Same as above, increasing gravel. | | CL | | | | 0 | |
| 40 | SANDY CLAY with GRAVEL, olive gray (5Y 5/2), slightly moist, stiff, firm, high plasticity, with sand (30%) and gravel (20%). | | CL | | | | 0 | |
| 45 | Same as above, olive (5Y 4/3). | | CL | | | | 0 | Harder drilling. |
| 50 | GRAVELLY CLAY with SAND, olive gray (5Y 5/2), slightly moist, firm, medium plasticity, with gravel up to 1" (30%) and sand (20%). | | CL | | | | 0 | |
| 55 | Same as above, very dark grayish brown (10YR 3/2), dry, hard. | | CL | | | | 0 | |
| 60 | ROCK, very dark brown (10YR 2/2), fractured, dry to slightly moist, firm, medium plasticity, with rounded gravel (<5%) and trace sand. | | RX | | | | 0 | Slightly easier drilling. Gradational contact with weathered, fractured bedrock. |
| 65 | Same as above, dry, hard. | | RX | | | | 0 | |
| 70 | | | | | | | | |

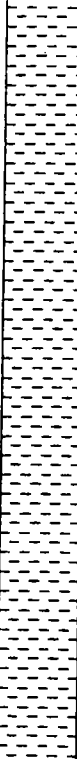
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|--------------|---|--|------|--------|---------------|-------------|-----------------|---|
| 75 | Same as above, slightly moist. |  | RX | | | | 0 | |
| 80 | Same as above, moist, highly fractured, soft to firm, with trace angular chert gravel. | | RX | | | | 0 | Easier drilling. |
| 85 | Same as above, wet. | | RX | | | | 0 | Slower drilling. |
| 90 | End of boring at 90 feet below ground surface. Groundwater encountered at 86 feet. Completed as 4" monitoring well. | | | | | | 0 | Traces of clay and gravel to total depth; no hard, unweathered rock encountered |
| 95 | | | | | | | | |
| 100 | | | | | | | | |
| 105 | | | | | | | | |
| 110 | | | | | | | | |